Writing an Express Schedule for Commuter Rail Service

Metra
Dan Miodonski & Lauren Rooney
Agenda

• Commuter Rail Scheduling
• Adding Weekend Express Service
• Expanding to Weekday
• Adjustments
• Conclusion
What is Commuter Rail Scheduling?

• Construction/Special Events

• Minor service adjustments based on demand and available resources

• Less frequent larger changes
Goals

• Develop weekend express service on the Rock Island Line

• Preserve existing level of service for intermediate stations

• Implement pilot period to gauge interest
Rock Island District
Weekend Express Schedule

• Split service schedule effective June 6 to November 29, 2015

• Increased ridership and received good feedback

• Made permanent November 30th, 2015
Rock Island District Stations – All Previous Trains

LaSalle St. Station
35th/ “Lou” Jones
Gresham
95th St. – Longwood
103rd St. – Washington Hts.
Brainerd
91st St. - Beverly Hills
95th St. - Beverly Hills
99th St. - Beverly Hills
103rd St. - Beverly Hills
107th St. - Beverly Hills
111th St. - Morgan Park
115th St. - Morgan Park
119th St.
123rd St.
Prairie St.

Blue Island – Vermont St.
Robbins
Midlothian
Oak Forest
Tinley Park
Tinley Park – 80th Ave.
Mokena – Hickory Creek
Mokena – Front St.
New Lenox

Joliet
Express Service Split

Rock Island District Main Line
LaSalle St. Station
35th/ “Lou” Jones
Gresham
95th St. – Longwood
103rd St. – Washington Hts.

Blue Island – Vermont St.
Robbins
Midlothian
Oak Forest
Tinley Park
Tinley Park – 80th Ave.
Mokena – Hickory Creek
Mokena – Front St.
New Lenox
Joliet

Rock Island District Beverly Branch
LaSalle St. Station
35th/ “Lou” Jones
Gresham

Brainerd
91st St. - Beverly Hills
95th St. - Beverly Hills
99th St. - Beverly Hills
103rd St. - Beverly Hills
107th St. - Beverly Hills
111th St. - Morgan Park
115th St. - Morgan Park
119th St.
123rd St.
Prairie St.
Blue Island – Vermont St.
Weekday Express Schedule

• Blue Island expresses already exist on weekdays

• Larger challenge to create without revamping weekday entire schedule

• Goal to create an express to a busier outlying station
Analysis

- Station Boarding count
- Train Passenger Counts
- Infrastructure
- Equipment cycles
Equipment Cycles
Analysis Results

• AM inbound express required reconfiguring almost the entire inbound schedule

• PM outbound had equipment available for an express
  • Determined to express to Tinley Park - 80th Avenue
  • Also would alleviate a crowded later train by adding a stop at Joliet
Implementation

• Express train was well received with high ridership . . .

• But received many complaints about later PM peak trains

• GPS and dispatching records showed that later trains were incurring delays
Adjustments Needed

• Deep dive:
  • Analyzed GPS/Dispatching data daily
  • Management rode trains to document times
  • Used different engineers to operate trains to rule out human error
  • Interviewed train crews

• Discovered legacy signal system was showing more restrictive signals than it should have

• Other minor schedule adjustments were necessary
New February 2016 Schedule

• Complaints immediately addressed with changes

• Trains operating as intended

• Increased weekday outbound ridership
Conclusion

• Customers love express service – who wouldn’t?

• Studying other lines and times to implement new express service where feasible

• Ensure that any schedule change is monitored closely after implementation